

Applicant: KJETIL NÆSJE
Attorney Docket No.: 1935-00178

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A device for a dispensing valve (4) in a pipe (2), the pipe (2) being connected, when in its position of use, to a receptacle containing a fluid at a pressure (P3), in which the valve (4) comprises:
 - an activating element;
 - a sealing element (22; 40) which is force-transmittingly connected to the activating element; and
 - a valve seat (26; 42) against which the sealing element (22; 40) seals when the valve (4) is inactive and in its position of rest;
 - in which the pipe (2) at least is open in a first end (32) and contains at least:
 - a separate pressure balancing channel (12) communicating only with the ambient pressure (P1) of the pipe (2);
 - a suction channel (28) communicating with the first end (32) of the pipe (2) and with the valve (4), and which is closed at a second end (34) of the pipe (2); and
 - said activating element in the form of a flexible membrane (6) attached internally in the pipe (2), and which separates the pressure balancing channel (12) from the suction channel (28);
 - in which the valve (4) is arranged to open to fluid outflow when the suction channel (28), via the first end (32) of the pipe (2), is supplied an underpressure (P2) which is less than said ambient pressure (P1) by a predetermined value, whereby the membrane (6) is exposed to a pressure difference (P1-P2) which activates and moves the membrane (6), thereby transmitting a valve-opening force to the sealing element (22; 40), characterized in that the membrane (6), the sealing element (22; 40) and its valve seat (26; 42) have a lengthy shape and extend in the longitudinal direction of the pipe (2); and

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- wherein the opposite long sides (8, 8') of the membrane (6) are attached to the inside (10) of the pipe (2) and at a distance from each other.

2. (Original) The device according to claim 1, characterized in that the lengthy sealing element (22) is force-transmittingly connected to the lengthy membrane (6) via a lengthy and axially extending first valve rib (18) attached to the membrane (6) and projecting outward therefrom; and

- wherein the lengthy valve seat (26) communicates with the pipe (2) via a lengthy and axially extending second valve rib (24) attached to the inside (10) of the pipe (2) and projecting outward therefrom;

- whereby an internal fluid outflow channel (30), which is open at the second end (34) of the pipe (2), is defined between the membrane (6), the inside (10) of the pipe (2) and said two valve ribs (18, 24).

(cf. figs. 1b and 1c)

3. (Original) The device according to claim 1, characterized in that the second end (34) of the pipe (2) is closed, whereby the suction channel (28) also is closed at this end;

- wherein the wall of the pipe (2) is provided with an axially extending and through-going slit (38) arranged vis-à-vis the suction channel (28), in which one slit surface (40) of the slit (38) constitutes the lengthy sealing element, whereas the other slit surface (42) of the slit (38) constitutes the lengthy valve seat; and

- wherein the sealing element (40) and the lengthy membrane (6) are force-transmittingly connected via an intermediate wall portion (44) of the pipe (2);

- whereby said two slit surfaces (40, 42) will move away from each other and open to fluid outflow when the suction channel (28) is supplied said valve-opening underpressure (P2).

(cf. figs. 2a and 2b)

4. (Original) The device according to claim 3, characterized in that at least a longitudinal portion and a perimeter portion of the pipe (2) are enclosed by an outer tubular mantle (48; 48a; 48b), said portions including said dispensing valve (4);

- wherein a first end (40) of the mantle (48; 48a; 48b) is attached sealingly against the pipe (2) in a region between the first end (32) of the pipe (2) and its dispensing valve (4), whereas a second end (52) of the mantle (48; 48a; 48b) is open;
- whereby an external fluid outflow channel (56) is defined between the pipe (2) and the outer mantle (48; 48a; 48b).

(cf. figs. 3a, 3b and 3c)

5. (Original) The device according to claim 4, characterized in that the outer tubular mantle (48; 48a; 48b) is comprised of a separate outer pipe (48a).

(cf. fig. 3b)

6. (Original) The device according to claim 5, characterized in that the outer pipe (48a) is telescopically arranged, whereby the outer pipe (48a) is extensible and contractible in its longitudinal direction.

7. (Original) The device according to claim 4, characterized in that the outer tubular mantle (48b) is incorporated together with a longitudinal portion of the pipe (2) containing the valve (4).

(cf. fig. 3c)

8. (Currently Amended) The device according to ~~any one of claims~~claim 4-7, characterized in that the second, open end (52) of the mantle (48; 48a; 48b) is shaped as a point (54), whereby the second end (52) of the mantle (48; 48a; 48b) may be readily inserted into said fluid receptacle.

9. (Currently Amended) The device according to ~~any one of the preceding claims~~claim 1, characterized in that the second end (34) of the pipe (2) is shaped as a point (46), whereby the pipe (2) may be readily inserted into said fluid receptacle.

10. (Currently Amended) The device according to ~~any one of the preceding claims~~claim 1, characterized in that the pressure balancing channel (12) is connected to at least one vent (16) communicating with the ambient pressure (P1) of the pipe (2).

11. (New) The device according to claim 5, characterized in that the second, open end (52) of the mantle (48; 48a; 48b) is shaped as a point (54), whereby the second end (52) of the mantle (48; 48a; 48b) may be readily inserted into said fluid receptacle.

12. (New) The device according to claim 6, characterized in that the second, open end (52) of the mantle (48; 48a; 48b) is shaped as a point (54), whereby the second end (52) of the mantle (48; 48a; 48b) may be readily inserted into said fluid receptacle.

13. (New) The device according to claim 7, characterized in that the second, open end (52) of the mantle (48; 48a; 48b) is shaped as a point (54), whereby the second end (52) of the mantle (48; 48a; 48b) may be readily inserted into said fluid receptacle.